

REMARKS

Claims 1-9, 13, 15 and 17-21 are presented for consideration, with Claims 1 and 2 being independent.

Minor amendments have been made to independent Claims 1 and 2.

The amendments to the claims were not presented earlier as it was believed that the previously presented claims would be found allowable. This Amendment does not add any additional claims. Moreover, the Examiner's familiarity with the subject matter of the present application will allow an appreciation of the significance of the amendments herein without undue expenditure of time and effort. Finally, the Amendment does not raise new issues requiring further consideration or search. Accordingly, it is submitted that entry of the Amendment is appropriate.

Claims 1-4, 6-9, 13, 15, 17, 18, 20 and 21 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Ikeda '521 in view of Akins '787. Claims 5 and 19 are rejected as allegedly being obvious over those citations and further in view of Iwai (JP '392). These rejections are respectfully traversed.

Applicants' invention as set forth in Claim 1 relates to a display apparatus comprised of a substrate on which a plurality of closed spaces are two-dimensionally disposed along a surface of the substrate, a plurality of light-absorbing particles contained in each of the closed spaces, and a reflection surface for reflecting light which enters each of the closed spaces. The particles are moved in each closed space, between a first position in which they are diffused to cover the reflection surface and a second position at which they are collected to expose the

reflection surface, to change an intensity of reflected light so as to provide a bright display state and a dark display state. The exposed reflection surface diffuse-reflects incident light with a directivity when the particles are located at the second position. As claimed, a light intensity of the diffuse reflection with the directivity has such an angular distribution that 1) an amount of reflected light toward the second position at which the particles are collected is smaller than that thereof in the case where the reflection surface is an isotropic diffuse reflection surface, and 2) an amount of reflected light toward positions other than the second position at which the particles are collected is larger than that of reflected light toward the position at which the particles are collected.

Claim 2 of Applicants' invention relates to a display apparatus that includes a substrate, a plurality of light-absorbing particles, and a reflection surface as set forth in Claim 1. Additionally, a partition wall divides closed spaces into each of the closed spaces in a direction along the surface of the substrate. Particles are moved in each closed space, between a first position and a second position to change an intensity of reflected light and provide a bright display state and a dark display state, as in Claim 1, with the exposed reflection surface diffuse-reflecting incident light with a directivity when the particles are located at the second position. A light intensity of the diffuse reflection with the directivity has such an angular distribution that 1) an amount of reflected light toward the partition wall is smaller than that thereof in the case where the reflection surface is an isotropic diffuse reflection surface, and 2) an amount of reflected light toward portions other than the partition wall is larger than that of reflected light toward the partition wall.

As discussed in the previous Amendment of August 13, 2008, Ikeda relates to an electrophoretic display device that includes display side and rear side substrates 1, 2, a cell wall 3, dispersing fluid 4 and charged particles 5. A first electrode 6 is provided on a surface of the rear side substrate, and a second electrode 7 is formed in a cell wall. Ikeda is relied on for its teaching of a substrate, a plurality of particles, a reflection surface and, with respect to Claim 2, a partition wall. It is acknowledged in the Office Action that Ikeda does not provide a light intensity with an angular distribution as provided for in Applicants' Claims 1 and 2.

The secondary citation to Akins was cited to compensate for the deficiencies in Ikeda. In Akins, a reflection type optical display device includes a prismatic film 12, an optical cell 14, and a reflector 16 (see Figure 1). The Office Action asserts that it would have been obvious to combine the display apparatus of Ikeda with the teachings of Akins "for the purpose of enhancing a viewer's perceived brightness of the display," relying on column 1, lines 9 and 10 in Akins.

In response, it is submitted that while Ikeda and Akins are directed generally to optical display devices, they relate more specifically to very different types of specialized display devices. In Ikeda, for example, its electrophoretic display device uses light absorbing particles and, in order to improve the viewing angle independence and provide a thin display, arranges the first and second electrodes in a particular manner. On the other hand, reflective liquid crystal displays, such as disclosed in Akins, are susceptible to glare. Akins attempts to improve "perceived brightness" by use of the prismatic film 12 formed in a manner to reduce such glare.

It is respectfully submitted, therefore, that it would not have been obvious, absent hindsight, to modify Ikeda's display apparatus to include a light intensity of a diffuse reflection with the directivity having a particular angular distribution. As noted above, however, Akins is unrelated to electrophoretic display devices, and its use of a prismatic film 12 to reduce glare would not provide sufficient incentive to modify Ikeda's apparatus as suggested in the Office Action.

Accordingly, reconsideration and withdrawal of the rejection of Claims 1-4, 6-9, 13, 15, 17, 18, 20 and 21 under 35 U.S.C. §103 is respectfully requested.

The Iwai patent relates to a liquid crystal display and was cited for its teaching of dividing a reflection surface into a plurality of areas. Iwai fails, however, to compensate for the deficiencies in Ikeda and Akins as discussed above. Reconsideration and withdrawal of the rejection of Claim 5 under 35 U.S.C. §103 is therefore respectfully requested.

Thus, it is submitted that Applicants' invention as set forth in independent Claims 1 and 2 is patentable over the cited art. In addition, dependent Claims 3-9, 13, 15 and 17-21 set forth additional features of Applicants' invention. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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